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ABSTRACT

This report measures the five-year (1995-2000) economic impact of Pellissippi State Technical Community College (PSTCC) on Knox and Blount counties in Tennessee. Results are based on a standard model of economic impact modified for community colleges. The model uses conservative income and employment multipliers to determine PSTCC's economic impact on the following: (1) business volume; (2) local employment; and (3) individual income. The study reveals that over $124 million in new, non-local, state/federal revenues flowed into the area during 1995-2000 as a result of PSTCC's presence. These external revenues represented 68% of the total college revenues for the period. A total of over $57 million in local revenues was also received by the college during this period. The combined five-year direct economic impact on the community represents over $402 million, or an average of $80 million per year. Of this amount, $313 million, or over $62 million per year, is due to the infusion of new external/non-local revenues. According to the report, this impact would likely not have occurred without the presence of Pellissippi State in the area. Another general trend over the five-year period is a decreasing percentage of state/federal revenues and an increasing percentage of local revenues. (Report contains 5 tables and 3 figures.) (NB)

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PELLISSIPPI STATE
PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE

An Analysis Of the College's Economic Impact

1995-2000

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A Major Partner in the Economic Vitality of the Knoxville Metropolitan Area

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PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE

A Major Partner in the Economic Vitality of the
Knoxville Metropolitan Area

AN ANALYSIS OF THE COLLEGE'S

ECONOMIC IMPACT

1995 - 2000

February 2001

Dr. Fred Martin

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Note: This report is also available on the College's web site at
www.pstcc.cc.tn.us/departments/institutional_research/strategic.htm

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EXECUTIVE SUMMARY

The thirteenth annual analysis of the direct economic impact of Pellissippi State Technical Community College (PSTCC) on Knox and Blount counties has recently been completed. It measures the College's five-year (1995-2000) economic impact on the community in terms of (1) business volume, (2) employment and (3) individual income. Not included in the study is the indirect economic impact that results from having a trained and educated work force available to local businesses.

The report is based on a standard model of economic impact modified for community colleges. The model uses conservative income and employment multipliers to determine economic impact.

The study reveals that over $124 million in "new", nonlocal, state/federal revenues flowed into the area during 1995-2000 as a result of the College's presence. These external revenues represented 68.4 percent of the total college revenues for the period. A total of over $57 million in local revenues was also received by the College during this period. The economic impact resulting from college expenditures in the area was as follows:

a. The local **business volume** generated by college expenditures during 1995-2000 was **$201.3 million**, with $155.0 million being due to non-local revenues. Annual business volume generated ranged from $37.2 million to $43.3 million.

b. Local **full-time jobs created** during 1995-2000 as a result of the College's presence totaled **14,989** (in addition to Pellissippi State's own 2,047 full-time jobs). Of this total, 11,367 jobs were the result of non-local revenues. Annual full-time jobs generated ranged from 2,786 to 3,212.

c. **Individual income** generated by college expenditures during 1995-2000 totaled **$200.8 million** using the more conservative indicator, with $157.8 million being due to non-local revenues. Annual individual income generated ranged from $36.7 million to $43.4 million.

In summary, the combined five-year direct economic impact on the community represents over **$402 million**, or an average of **$80.4 million** per year. Of this amount, $312.8 million, or over $62 million per year, is due to the infusion of "new" external/non-local revenues. This impact would likely not have occurred without the presence of Pellissippi State in the area.

It is significant that for every **$1.00** of local revenues coming to Pellissippi State, there was $3.49 of local business volume and from $3.48 to $3.88 of individual income generated, for a total investment return of **$6.97** to **$7.37** on the local dollar!

Another general trend over the 5 year period is a decreasing percentage of state/federal revenues and increasing percentage of local revenues. The non-local percentage declined from 72% to 67% while the local percentage increased from 28% to 33%, reflecting the state's financial problems and increases in student fees.

The study documents the significant force Pellissippi State has become in the economic vitality of the Knoxville metropolitan area.

INTRODUCTION

Pellissippi State Technical Community College has served the Knoxville metropolitan area since 1974, experiencing significant enrollment growth as indicated in Figure 1. This report is the thirteenth annual analysis of the five-year (1995-2000) economic impact of Pellissippi State on the Knoxville metropolitan area. The primary counties affected are Knox and Blount, with approximately 83 percent of the College's expenditures being made, on the average, in those two counties.

The analysis measures the direct, explicit economic impact of Pellissippi State on the community. It does not include the implicit, intangible economic impact that results from having a trained and educated work force available for local businesses or from expansion/recruitment of industry as a result of the presence of the College. The analysis is based on the Caffrey model of economic impact, originally developed in 1968 through the American Council of Education. The model has been adapted for application to community colleges.[1]

The model uses conservative income and employment multipliers to determine Pellissippi State's economic impact on the following:

1. Business volume—the total amount of local business volume generated as a result of the College's direct and indirect expenditures.
2. Local employment—the total number of full-time jobs generated by the College's direct and indirect expenditures.
3. Individual income—the total amount of personal income earned by local households as a result of the College's direct and indirect expenditures.

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[1]Norval L. Wellsfry, "The Los Rios Community College District: A Major Partner in the Sacramento Area's Economic Vitality," 1988 (unpublished paper).

METHODOLOGY

The model is based on a circular cash flow model as illustrated in Figure 2. The community is treated as a semi-closed economic system, with money entering the system through Pellissippi State from both local and external or "new" sources.

The local sources of revenue include student fees, local grants/contracts, private scholarships, gifts and other miscellaneous local revenue. External or "new" revenues include state appropriations for both operating and capital purposes, federal/state student financial aid revenues, state/federal grants and contracts, etc.

Pellissippi State circulates its revenues through the local economy via expenditures for employee salaries, construction, and local purchases of equipment and supplies. These expenditures are then re-circulated through the economy, increasing in value and having a multiplier or secondary impact as local businesses and households make expenditures and generate jobs.

Economic impact on the community is measured on two levels: (1) in relationship to total expenditures from all revenue sources and (2) in relationship to expenditures from only those external or "new" revenues that would likely not have occurred without Pellissippi State's presence in the economy. The following college revenues and expenditures for the five-year period 1995-2000 were incorporated into a LOTUS 1-2-3 spreadsheet template containing the model.

REVENUE SOURCES
FISCAL YEAR

SOURCES	1995-96	1996-97	1997-98	1998-99	1999-00	TOTAL
GENERAL						
State Appro	15,109,700	15,347,500	15,363,800	16,548,800	17,062,100	79,431,900
Local Prop Tax						
Enroll Fees	7,472,516	8,285,699	8,900,535	10,012,230	10,222,611	44,893,591
TOTAL	22,582,216	23,633,199	24,264,335	26,561,030	27,284,711	124,325,491
FEDERAL	28,752	48,741	72,487	71,761	65,828	287,569
OTHER STATE	13,364	12,150		5,500	7,525	38,539
COUNTY						
LOCAL	794,276	859,020	798,174	966,165	1,133,371	4,551,006
OTHER LOCAL	0	0	0	0	0	0
SPECIAL REVENUE						
FEDERAL	765,887	953,305	1,089,304	1,087,330	943,197	4,839,023
STATE	3,078,069	281,054	172,039	209,100	418,835	4,159,097
LOCAL	1,363,398	1,014,556	875,319	720,967	583,995	4,558,235
OTHER	0	0	0	0	0	0
STUDENT FINANCIAL AID						
FEDERAL	5,910,754	6,310,163	6,803,033	7,012,031	6,714,649	32,750,630
STATE	533,603	466,523	497,095	684,317	739,589	2,921,127
LOCAL	371,611	472,231	811,759	1,270,276	741,882	3,667,759
OTHER						
TOTAL REVENUE	35,441,930	34,050,942	35,383,545	38,588,477	38,633,582	182,098,476
LOCAL	10,001,801	10,631,506	11,385,787	12,969,638	12,681,859	57,670,591
NON-LOCAL	25,440,129	23,419,436	23,997,758	25,618,839	25,951,723	124,427,885
LOCAL %	28.2%	31.2%	32.2%	33.6%	32.8%	31.6%
NON-LOCAL %	71.8%	68.8%	67.8%	66.4%	67.2%	68.4%

EXPENDITURES
FISCAL YEAR

DATA	1995-96	1996-97	1997-98	1998-99	1999-00	TOTAL
WAGES	15,145,883	15,807,808	15,779,822	16,724,534	16,951,133	80,409,180
NON-SAL EXPEN	6,996,179	7,078,738	7,174,011	8,231,320	9,997,737	39,477,985
CAPITAL EXPEN	4,760,286	2,014,883	2,047,445	3,149,029	2,076,178	14,047,821
STU FIN AID	6,815,968	7,248,917	8,111,887	8,966,624	8,196,120	39,339,516
Net Wages	11,359,412	11,855,856	11,834,867	12,543,401	12,713,350	60,306,885
Non-salary, Local	5,771,848	5,839,959	5,918,559	6,790,839	8,248,133	32,569,338
Capital, Local	3,927,236	1,662,278	1,689,142	2,597,949	1,712,847	11,589,452
FT Jobs	415	391	401	406	434	2,047
Non-local Revenue %	71.8%	68.8%	67.8%	66.4%	67.2%	68.4%
Expenditures	27,874,464	26,607,010	27,554,455	30,898,812	30,870,450	143,805,191
Expenditures (NEW)	21,931,704	20,562,958	21,298,187	23,527,375	23,427,375	110,747,598

For the five-year period, $124.4 million in non-local revenues was brought into the service area, along with $57.7 million in local revenues. The five-year average was 68.4 percent nonlocal and 31.6 percent local revenues. It should be noted that the percentage of non-local revenues declined from 71.8% to 67.2% over the five years, with a corresponding increase in local revenue percentages. This trend reflects the state's decreased funding of higher education and the resulting increases in student fees.

RESULTS

Business Volume Impact

The local business volume impact generated by Pellissippi State expenditures is shown below:

BUSINESS VOLUME

	1995-96	1996-97	1997-98	1998-99	1999-00	TOTAL
BUSINESS VOLUME	39,024,249	37,249,814	38,576,237	43,258,337	43,218,629	201,327,267
BUSINESS VOLUME (NEW)	30,704,385	28,788,141	29,817,462	32,938,325	32,798,324	155,046,637

The business volume impact of total college expenditures ranged from $37.2 million to $43.3 million, with a five-year total of $201.3 million. The impact of external or "new" college funds ranged from $28.8 million to $32.9 million, with a five-year total of $155.0 million. Figure 3 graphs the relationship between local revenues and total business volume.

Employment Impact

The local employment impact in terms of full-time jobs created by Pellissippi State expenditures is shown on the next page:

EMPLOYMENT IMPACT

	1995-96	1996-97	1997-98	1998-99	1999-00	TOTAL
EMPLOYMENT	2,923.70	2,785.63	2,880.90	3,186.89	3,212.34	14,989
EMPLOYMENT (NEW)	2,271.74	2,119.59	2,188.80	2,387.01	2,400.00	11,367

Pellissippi State's own full-time (FT) jobs ranged from 391 to 434 during this period, yet the total annual employment created by college expenditures ranged from 2,786 to 3,212. The number of jobs created annually by external or "new" funds ranged from 2,120 to 2,400. Figure 4 graphs the relationship between the College's FT jobs and both total and "new" FT jobs generated by the College's presence.

Individual Income Impact

The local impact of Pellissippi State's expenditures on personal income is calculated using two different multipliers to produce a range of impact, shown below as Type I and Type II. The Type I multiplier is the more conservative measure.

INCOME IMPACT

	1995-96	1996-97	1997-98	1998-99	1999-00	TOTAL
TYPE I	39,118,061	36,727,777	38,303,174	43,391,607	43,242,216	200,782,835
TYPE II	43,440,090	41,238,693	42,806,104	48,164,120	48,079,392	223,728,399
TYPE I (NEW)	31,251,459	28,993,581	30,283,290	33,778,448	33,485,196	157,791,974
TYPE II (NEW)	34,353,801	32,096,083	33,337,259	36,946,913	36,734,520	173,468,575

The total impact of college expenditures on personal income, using the more conservative indicator, ranged from $36.7 million to $43.4 million, with a five-year total of $200.8 million. The impact of external or "new" funds ranged from $29.0 million to $33.8 million, with a five-year total of $157.8 million. Figure 3 also graphs the relationship between local revenues and total personal income.

In summary, the combined five-year direct economic impact on the community represents over $402 million, or an average of $80.4 million per year. Of this amount, $312.8 million, or over $62 million per year, was due to the infusion of "new", external/non-local revenues. This impact would likely not have occurred without the presence of Pellissippi State in the area.

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CONCLUSIONS

The results of this economic impact study clearly demonstrate that Pellissippi State Technical Community College is a major contributor to the economic base of Knox and Blount Counties. In addition to the more implicit impact of a community college on the improved productivity and quality of life achieved through increased education, the explicit economic impact is significant. This economic impact is expressed in terms of jobs created, business volume generated and personal income earned.

As Pellissippi State continues to grow in enrollment and/or budget, its economic impact on the Knoxville metropolitan area will increase similarly. The College has clearly become a major partner and force in the economic vitality of the Knoxville metropolitan area.

PSTCC HISTORICAL HEADCOUNT ENROLLMENT BY FALL TERMS

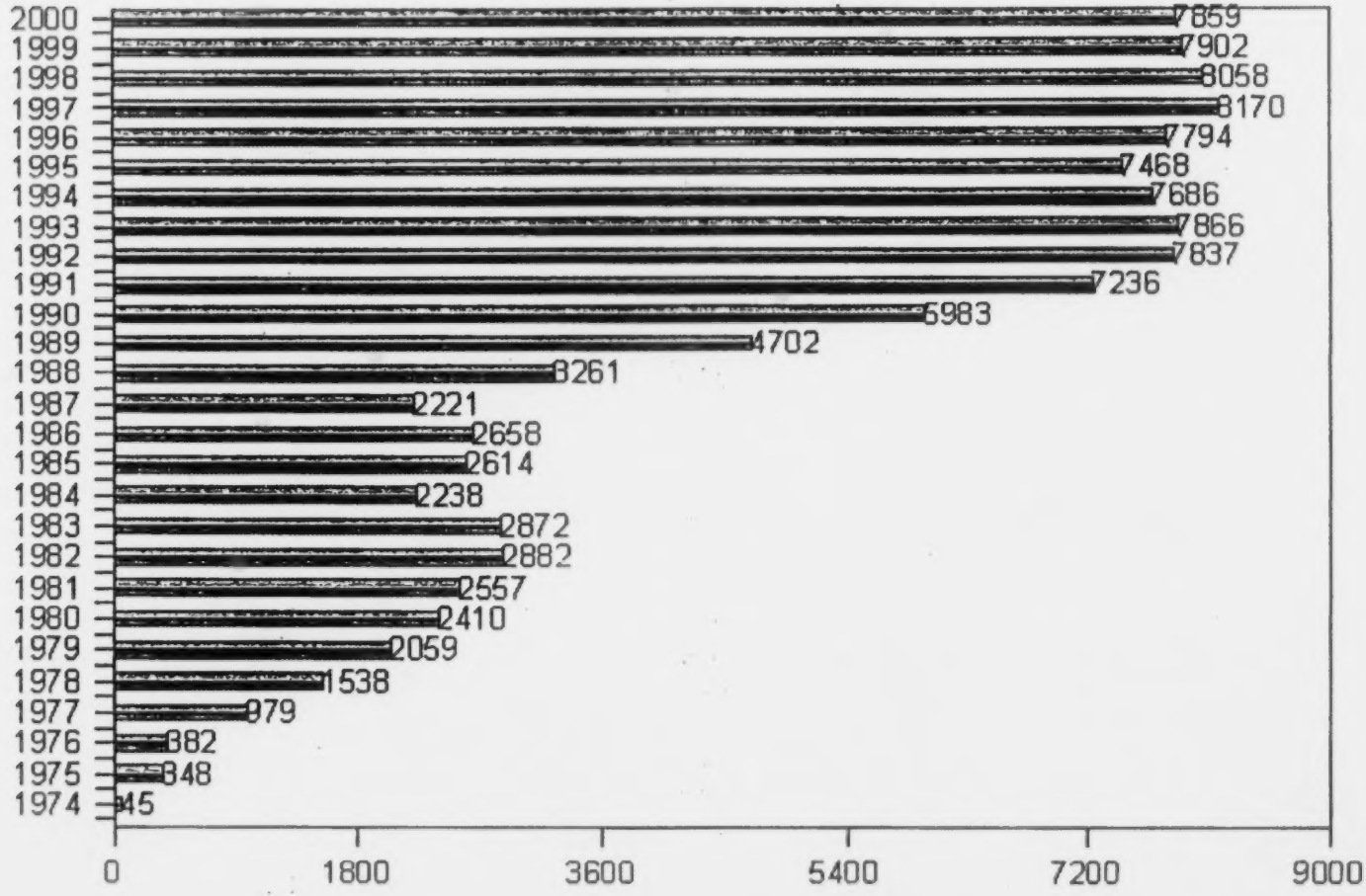

Figure 1

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Circular Cash Flow Model

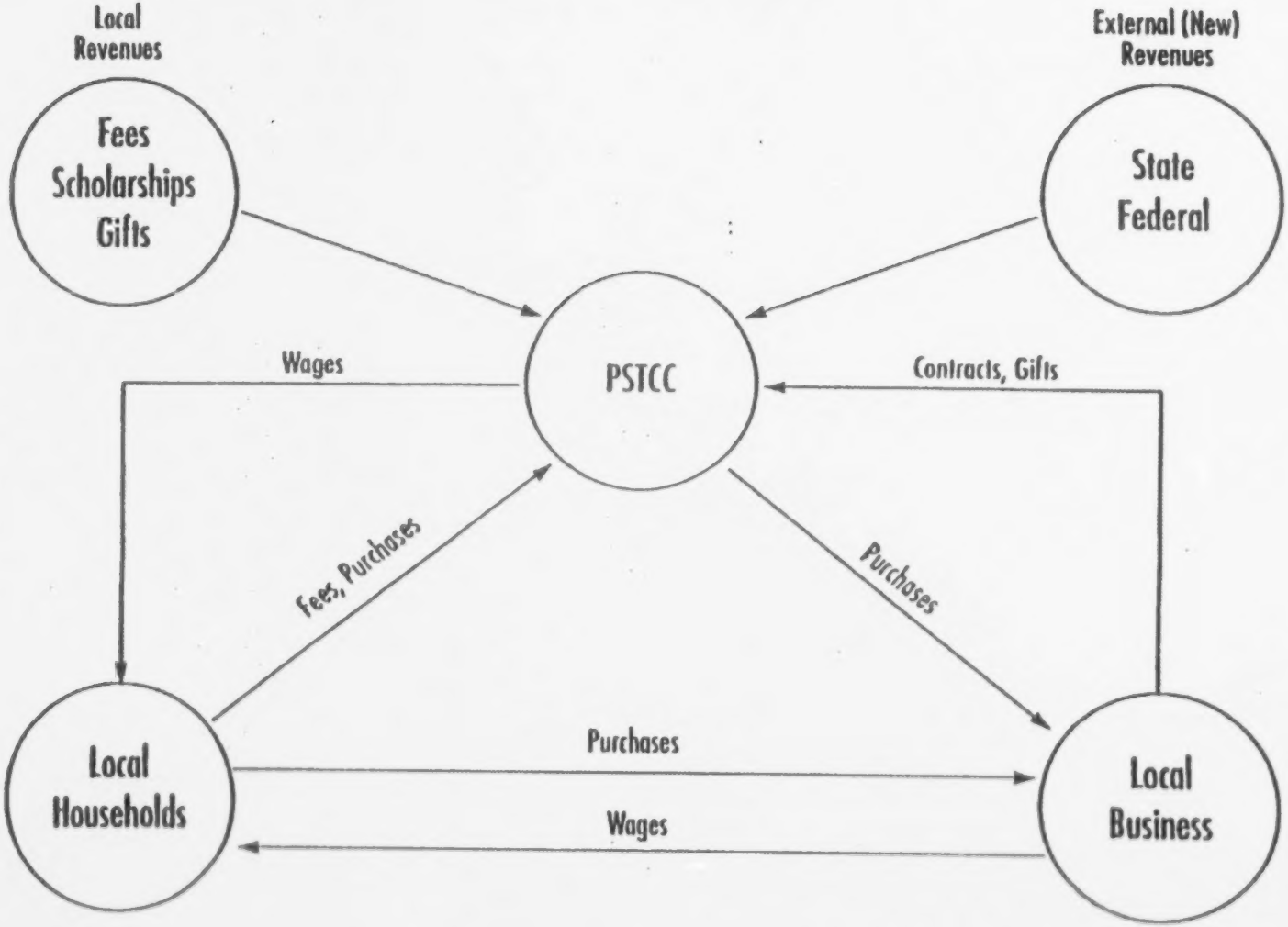

Figure 2

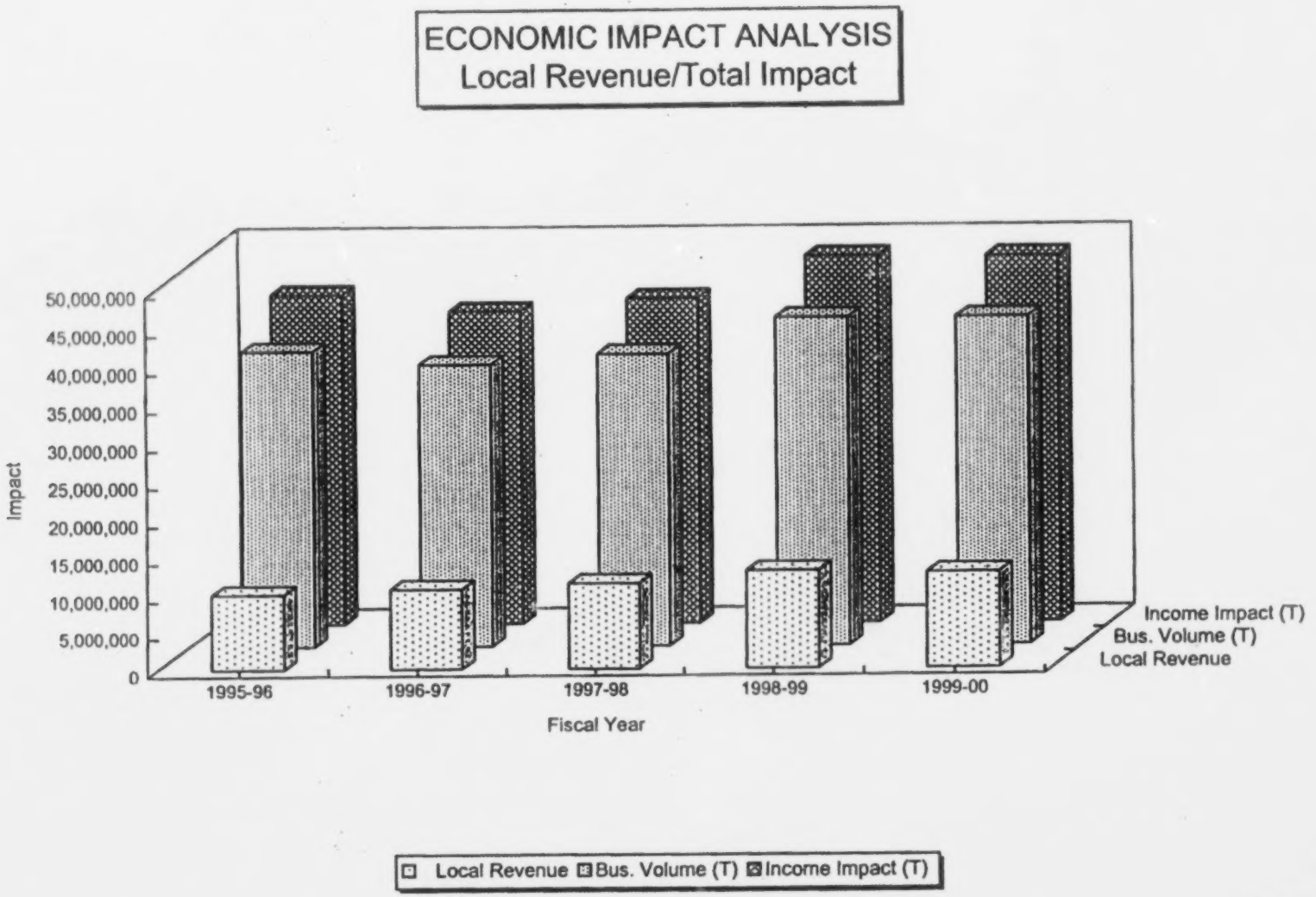
ECONOMIC IMPACT ANALYSIS
Local Revenue/Total Impact
Impact
50,000,000
45,000,000
40,000,000
35,000,000
30,000,000
25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
0
1995-96
1996-97
1997-98
1998-99
1999-00
Fiscal Year
Income Impact (T)
Bus. Volume (T)
Local Revenue
Local Revenue
Bus. Volume (T)
Income Impact (T)

Figure 3

ECONOMIC IMPACT ANALYSIS
Employment Impact

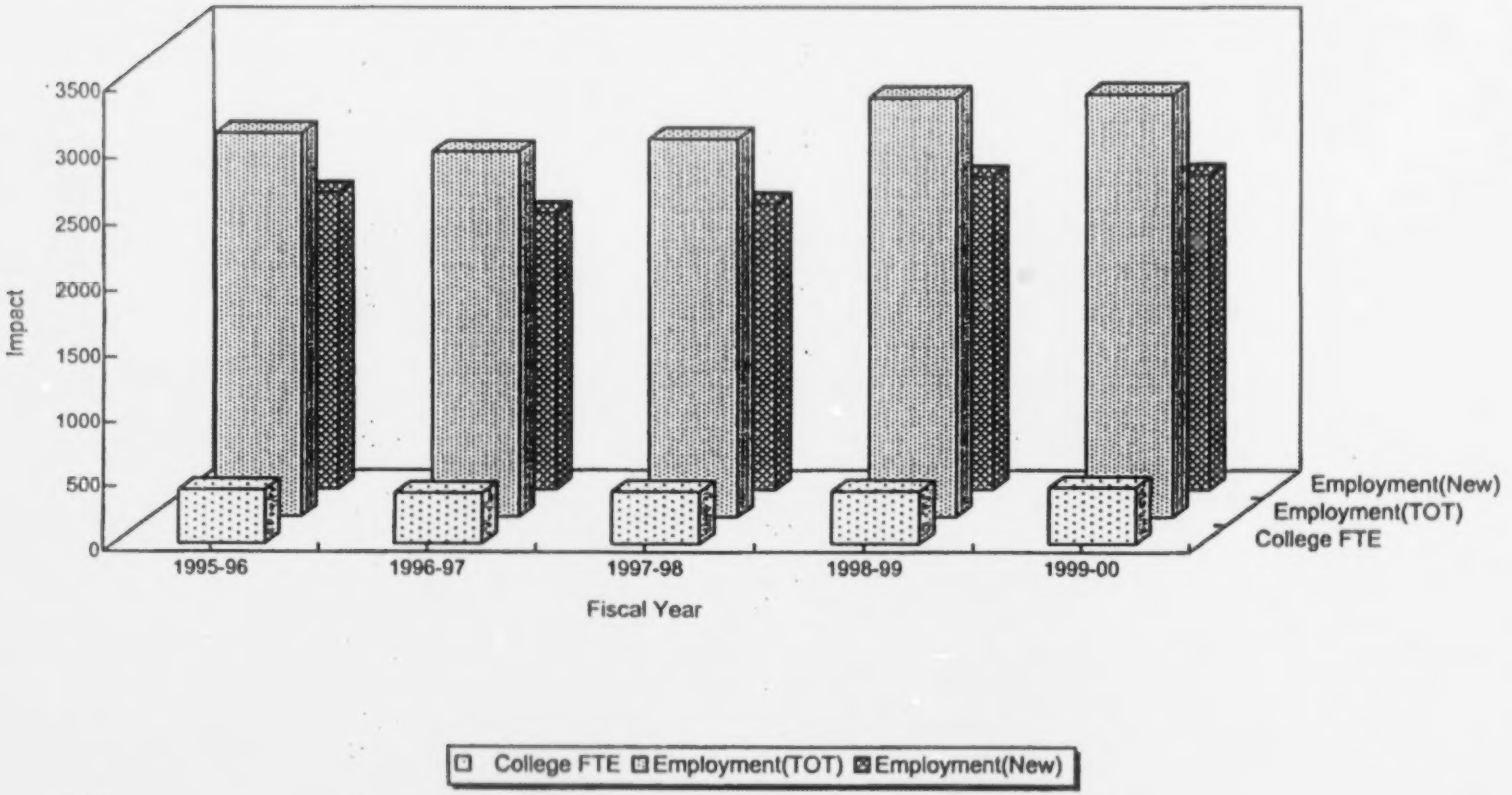

Figure 4